**Quick Start Guide**
00825-0200-4420, Rev FE
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# Emerson™ Smart Wireless Gateway 1420

IEC WirelessHART

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Process Management

## NOTICE

This guide provides basic guidelines for the Smart Wireless Gateway. It does not provide instructions for diagnostics, maintenance, service, or troubleshooting. Refer to the Smart Wireless Gateway Reference Manual (document number 00809-0200-4420) for more information and instructions. This guide and the manual are available electronically on www.emersonprocess.com.

## ⚠ WARNING

**Explosions could result in death or serious injury.**

- Installation of this device in an explosive environment must be in accordance with the appropriate local, national, and international standards, codes, and practices. Review the Product Certifications section for any restrictions associated with a safe installation.
- Avoid contact with the leads and terminals. High voltage may be present on leads can cause electrical shock.

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:**

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.
- This device must be installed to ensure a minimum antenna separation distance of 20 cm from all persons.

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# Wireless considerations

## Power up sequence

The Smart Wireless Gateway (Gateway) should be installed and functioning properly before power modules are installed in any wireless field devices. Wireless field devices should also be powered up in order of proximity from the Smart Wireless Gateway beginning with the closest. This will result in a simpler and faster network installation.

## Antenna position

The antenna should be positioned vertically, and be approximately 3-ft. (1 m) from large structures or buildings to allow for clear communication to other devices.

## Mounting height

For optimal wireless coverage, the Gateway or remote antenna is ideally mounted 15- to 25-ft. (4,6 to 7,6 m) above ground or 6-ft. (2 m) above obstructions or major infrastructure.

## Gateway redundancy

If the wireless Gateway was ordered with redundancy (Gateway Redundancy code RD), refer to Appendix D in the Smart Wireless Gateway Reference Manual (document number 00809-0200-4420) for additional installation instructions.

# General considerations

## PC requirements

Operating system (optional software only)

- Microsoft® Windows™ XP Professional, Service Pack 3
- Windows Server 2003 Service Pack 2
- Windows Server 2003 R2 Service Pack 2
- Windows Server 2008 (Standard Edition), Service Pack 2
- Windows Server 2008 R2 Standard Edition, Service Pack 1
- Windows 7 Professional, Service Pack 1
- Windows 7 Enterprise, Service Pack 1

Applications

- Internet Explorer® 6.0 or higher
- Mozilla Firefox® 1.5 or higher
- .Net Framework 2.0 (for OPC proxy only)

Hard disk space

- AMS® Wireless Configurator: 1.5 GB
- Gateway Setup CD: 250 MB

# Step 1: Initial connection and configuration

# DeltaV™ ready

If the Gateway was ordered DeltaV Ready (Data Protocols Code 5), then skip to Step 2: Physical installation, and connect the Gateway to a DeltaV 10.3 or newer control network.

# Initial connection and configuration

To configure the Smart Wireless Gateway, a local connection between a PC/laptop and the Gateway needs to be established.

## Powering the Gateway

Bench top power will be needed to power the Gateway by wiring a 24 VDC (nominal) power source, with at least 250 mA, to the power terminals.

**Figure 1. Legacy Gateway Terminal Block Diagram**

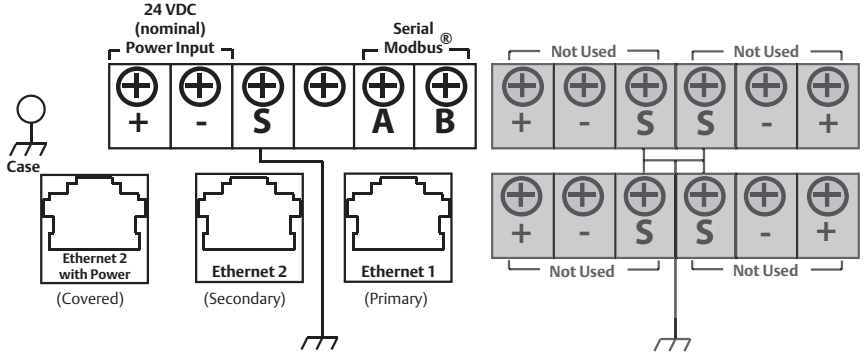
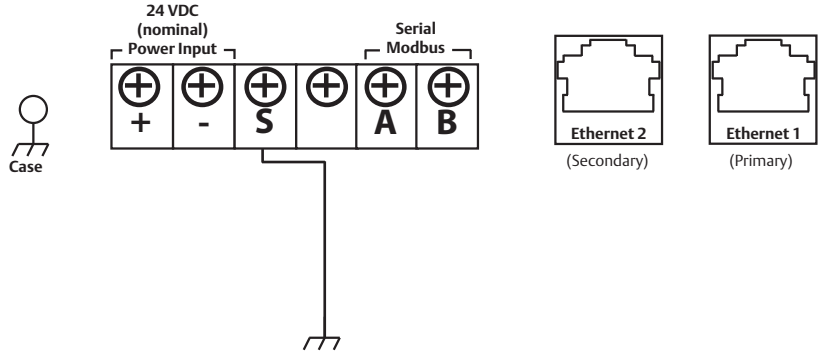



**Figure 2. Power over Ethernet (PoE) Terminal Block Diagram**



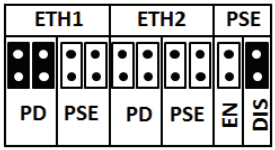
**Note**
Figure 1 depicts the terminal block of legacy Gateways prior to the introduction of PoE capabilities. Figure 2 shows the terminal block arrangement of a PoE version of the Gateway. If the Gateway will be powered via the standard 24 volt power input terminals, and no PSE is desired, it is not necessary to change the default settings of the PoE jumper matrix.

**Note**
The Gateway enclosure case should always grounded in accordance with national and local electrical codes. The most effective grounding method is a direct connection to earth ground with minimal impedance.

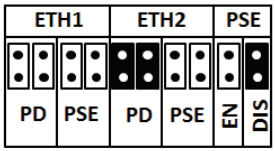
**Figure 3. 1420 PoE Jumpering Matrix (Located on 1420 Board)**

Black fill below indicates jumper.

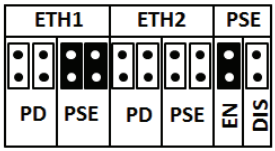
**PoE PD on port 1**
(Default jumpering for production. Used for no PoE also)



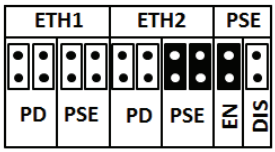

**PoE PD on port 2**




**PoE PSE on port 1**




**PoE PSE on port 2**




Legend:
**ETH1:** Ethernet port 1 selected for PD or PSE
**ETH2:** Ethernet port 2 selected for PD or PSE
**PD**: Gateway derived its power off the Ethernet port selected
**PSE:** The Gateway is powered via the standard 24 volt power input terminals and provides power via the selected Ethernet port to another device with a compatible PD port.
**EN:** Enabled; this enables the PSE operation
**DIS:** Disabled; this disables the PSE operation

**Note**
Electrostatic discharge (ESD) protection required when swapping PoE jumpers.

**Note**
Only one port and one mode of operation (PD or PSE) can be selected at a time; any other combination of jumpers is invalid.

**Note**
IEEE 802.3af-2003 PoE standard provides up to 15.4 W of DC power (minimum 44 V DC and 350 mA) to each device. Only 12.95 W is assured to be available at the powered device as some power is dissipated in the cable.

IEEE 802.3at-2009 PoE standard also known as “PoE+” or “PoE plus”, provides up to 25.5 W of power. The 2009 standard prohibits a powered device from using all four pairs for power.

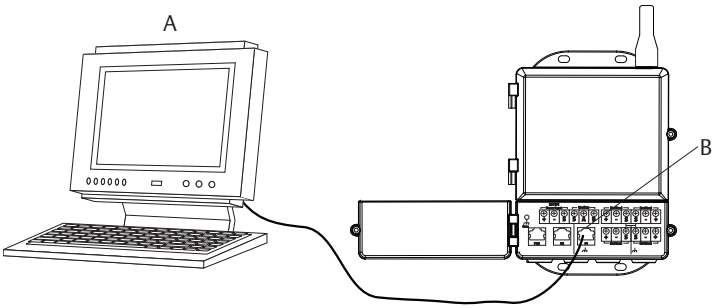
For more information on PoE and frequently asked questions, reference document number 00870-0500-4420.

## Establishing a connection

**Note**
For information on connecting a Windows 7 PC, see Technical Note (document number 00840-0900-4420).

1. Connect the PC/laptop to the Ethernet 1 (Primary) receptacle on the Gateway.

**Figure 4. Gateway PC/Laptop Connection**

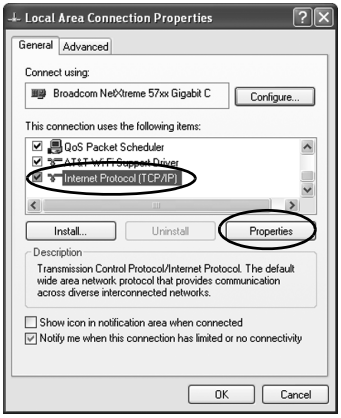



A. PC/laptop
B. Ethernet 1 receptacle

**⚠ CAUTION**
Do not connect to the Ethernet 2 with power (covered) port. This port supplies power and could damage the PC/laptop.

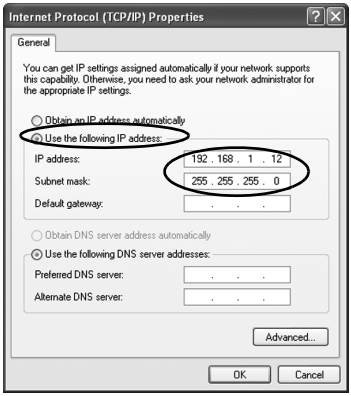
2. To establish the PC/laptop settings, navigate to **Start>Settings>Network Connections**.
   a. Select **Local Area Connection**.
   b. Right click to select **Properties**.

c. Select **Internet Protocol (TCP/IP)**, then select the **Properties** button.




**Note**
If the PC/laptop is from another network, record the current IP address and other settings so the PC/laptop can be returned to the original network after the Gateway has been configured.

d. Select the **Use the following IP address** button.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 1 . 12
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

e. In the *IP address* field, enter *192.168.1.12*.

f. In the *Subnet mask* field, enter *255.255.255.0*.

g. In the *Internet Protocol (TCP/IP) Properties* window, select **OK**.

h. In the *Local Area Connection Properties* window, select **OK**.

**Note**
Connecting to the Gateway's secondary Ethernet port requires different network settings. Refer to Table 1 for additional network settings.

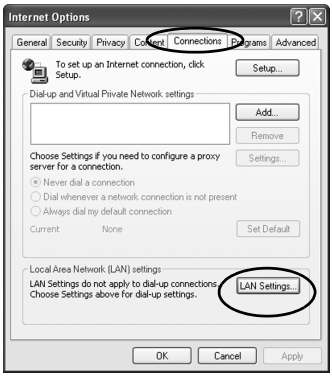
### Table 1. Default IP Addresses

| | Gateway | PC/laptop |
|---|---|---|
| Ethernet 1 | 192.168.1.10 | 192.168.1.12 |
| Ethernet 2 | 192.168.2.10 | 192.168.2.12 |
| Ethernet 1 (DeltaV Ready) | 10.5.255.254 | 10.5.255.200 |
| Ethernet 2 (DeltaV Ready) | 10.9.255.254 | 10.9.255.200 |

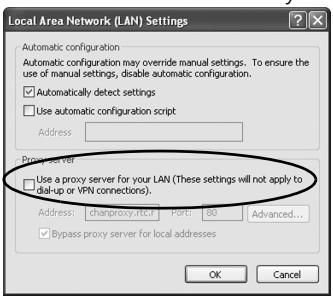
### Table 2. Subnet Settings

| Subnet mask | |
|---|---|
| Default | 255.255.255.0 |
| DeltaV | 255.254.0.0 |

3. Disable proxies.
   a. Open a standard web browser (Internet Explorer, Mozilla Firefox, or other).
   b. Navigate to **Tools>Internet Options>Connections>LAN Settings**.




   c. Uncheck the box under *Proxy Server*.

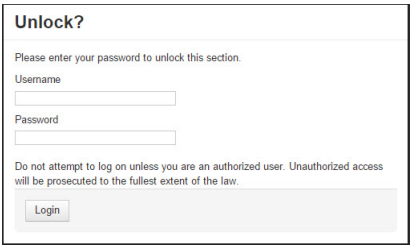


# Configure the Smart Wireless Gateway

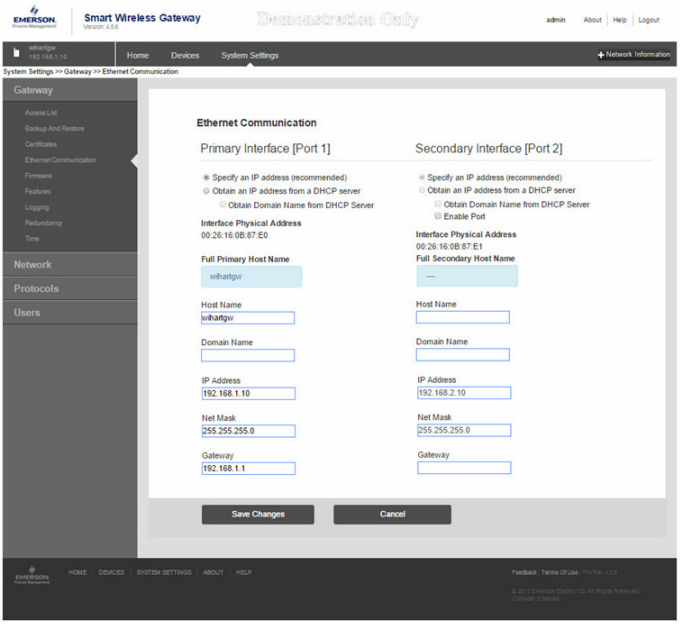
To complete initial configuration for the Gateway:

1. Access the default web page for the Gateway at *https://192.168.1.10*.
   a. In the *User name* field, enter **admin**.
   b. In the *Password* field, enter **default**.

**Figure 5. Gateway Log In Screen**


Unlock?
Please enter your password to unlock this section.
Username
Password
Do not attempt to log on unless you are an authorized user. Unauthorized access will be prosecuted to the fullest extent of the law.
Login

2. Navigate to **System Settings>Gateway>Ethernet Communication** to enter the Network Settings.
   a. Configure a static IP Address or set for DHCP and enter a Hostname.
   b. Restart application at **System Settings>Gateway>Backup And Restore>Restart App**.
3. Disconnect the power and Ethernet from the Gateway.

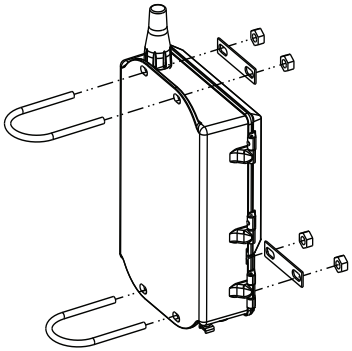


# Step 2: Physical installation

## Pipe mount

Tools needed:

- 2-in. (51 mm) mounting pipe or mast
- Two $^{5}/_{16}$-in. (7,9 mm) u-bolts supplied with Gateway
- $^{1}/_{2}$-in. socket-head wrench



For installing the Gateway with a pipe mount:

1. Insert one u-bolt around the pipe, through the top mounting holes of the Gateway enclosure, and through the washer plate.
2. Use a $^{1}/_{2}$-in. socket-head wrench to fasten the nuts to the u-bolt.
3. Repeat steps 1 and 2 for the second u-bolt and lower mounting holes.

### Best practice

If the Gateway was ordered with output code 2, run a secondary Ethernet cable when installing cable conduit from the Gateway to a convenient indoor location to simplify future configuration changes.

## Remote antenna (optional)

The remote antenna options provide flexibility for mounting the Gateway based on wireless connectivity, lightning protection, and current work practices.

**⚠ WARNING**

When installing remote mount antennas for the Smart Wireless Gateway, always use established safety procedures to avoid falling or contact with high-power electrical lines.

Install remote antenna components for the Smart Wireless Gateway in compliance with local and national electrical codes and use best practices for lightning protection.

Before installing, consult with a local area electrical inspector, electrical officer, and work area supervisor.

The Smart Wireless Gateway remote antenna option is specifically engineered to provide installation flexibility while optimizing wireless performance and local spectrum approvals. To maintain wireless performance and avoid non-compliance with spectrum regulations, do not change the length of cable or the antenna type.

If the supplied remote mount antenna kit is not installed per these instructions, Emerson Process Management is not responsible for wireless performance or non-compliance with spectrum regulations.

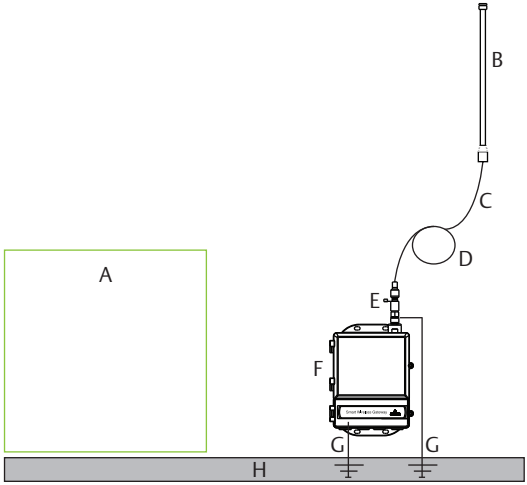
The remote mount antenna kit includes coaxial sealant for the cable connections for the lightning arrestor and antenna.

Find a location where the remote antenna has optimal wireless performance. Ideally this will be 15- to 25-ft. (4,6 to 7,6 m) above the ground or 6-ft. (2 m) above obstructions or major infrastructure. To install the remote antenna use one of the following procedures:

## Installation of WL2/WN2 option (outdoor applications)

1. Mount the antenna on a 1.5- to 2-in. pipe mast using the supplied mounting equipment.
2. Connect the lightning arrestor directly to the top of the Gateway.
3. Install the grounding lug, lock washer, and nut on top of the lightning arrestor.
4. Connect the antenna to the lightning arrestor using the supplied coaxial cable ensuring the drip loop is not closer than 1-ft. (0,3m) from the lightning arrestor.
5. Use the coaxial sealant to seal each connection between the wireless field device, lightning arrestor, cable, and antenna.
6. Ensure the mounting mast, lightning arrestor, and Gateway are grounded according to local/national electrical code.
7. Place any spare lengths of coaxial cable in 12-in. (0,3 m) coils.

**Figure 6. Installation of WL2/WN2 Option**

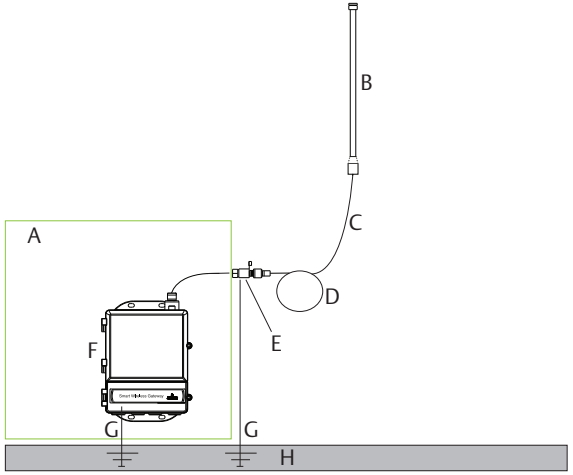



A. Control building
B. Remote antenna
C. Cable
D. Drip loop
E. Lightning arrestor
F. Gateway
G. Ground
H. Earth

## Installation of WL3/WL4 option (indoor to outdoor applications)

1. Mount the antenna on a 1.5- to 2-in. pipe mast using the supplied mounting equipment.
2. Mount the lightning arrestor near the building egress.
3. Install the grounding lug, lock washer, and nut on top of the lightning arrestor.
4. Connect the antenna to the lightning arrestor using the supplied coaxial cable ensuring the drip loop is not closer than 1-ft. (0,3m) from the lightning arrestor.
5. Connect the lightning arrestor to the Gateway using the supplied coaxial cable.
6. Use the coaxial sealant to seal each connection between the Gateway, lightning arrestor, cable, and antenna.
7. Ensure the mounting mast, lightning arrestor, and Gateway are grounded according to local/national electrical codes.
8. Place any spare lengths of coaxial cable in 12-in. (0,3 m) coils.

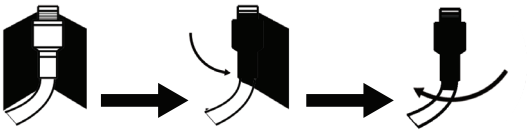
## Figure 7. Installation of WL3/WL4 Option




A. Control building
B. Remote antenna
C. Cable
D. Drip loop
E. Lightning arrestor
F. Gateway
G. Ground
H. Earth

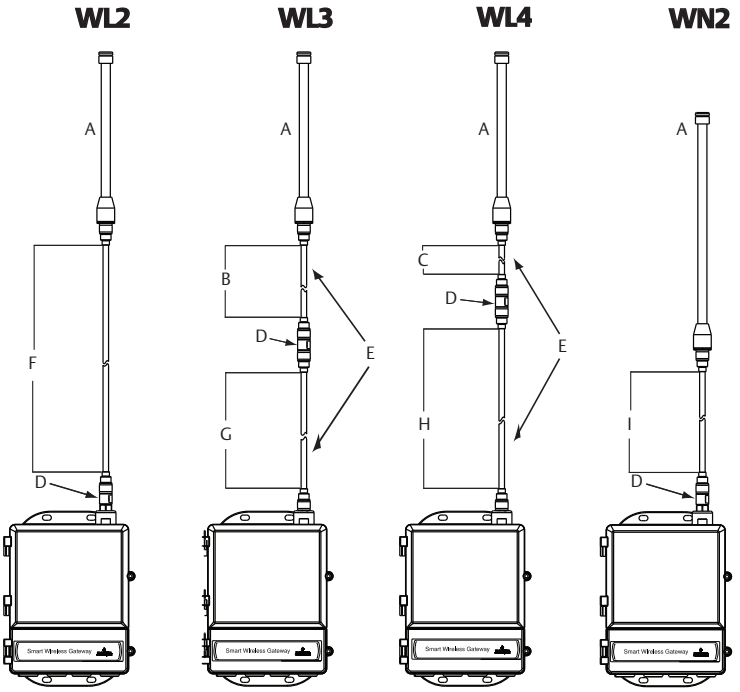
**Note: Weather proofing is required!**
The remote mount antenna kit includes coaxial sealant for the cable connections for the lightning arrestor, antenna, and Gateway. The coaxial sealant must be applied to guarantee performance of the wireless field network. See Figure 8 for details on applying weather proofing.

## Figure 8. Applying Coaxial Sealant to Cable Connections



## Table 3. Remote Antenna Kit Options

| Kit option | Antenna | Cable 1 | Cable 2 | Lightning arrestor |
|---|---|---|---|---|
| WL2 | 1/2 Wavelength Dipole Omni-Directional +6 dB Gain | 50-ft. (15,2 m) LMR-400 | N/A | Head mount, jack to plug Gas discharge tube 0.5 dB insertion loss |
| WL3 | 1/2 Wavelength Dipole Omni-Directional +6 dB Gain | 30-ft. (9,1 m) LMR-400 | 20-ft. (6,1 m) LMR-400 | In-line, jack to jack Gas discharge tube 0.5 dB insertion loss |
| WL4 | 1/2 Wavelength Dipole Omni-Directional +6 dB Gain | 40-ft. (12,2 m) LMR-400 | 10-ft. (3,0 m) LMR-400 | In-line, jack to jack Gas discharge tube 0.5 dB insertion loss |
| WN2 | 1/2 Wavelength Dipole Omni-Directional +8 dB Gain | 25-ft. (7,6 m) LMR-400 | N/A | Head mount, jack to plug Gas discharge tube 0.5 dB insertion loss |




A. Antenna
B. 20-ft. (6, 1 m) cable
C. 10-ft. (3, 0 m) cable
D. Lightning arrestor
E. Interchangeable cables
F. 50-ft. (15, 2 m) cable
G. 30-ft. (9, 1m) cable
H. 40-ft. (12, 2 m) cable
I. 25-ft. (7, 6m) cable

**Note**
The coaxial cables on the remote antenna options WL3 and WL4 are interchangeable for installation convenience.

# Step 3: Connect to the host system

1. Wire the Gateway's Ethernet 1 (Primary) or Serial Output connection to the Host System Network or Serial I/O.
2. For serial connections, connect A to A, B to B, making sure all terminations are clean and secured to avoid wiring connection problems.

**Figure 9. Legacy Gateway Terminal Block Diagram**

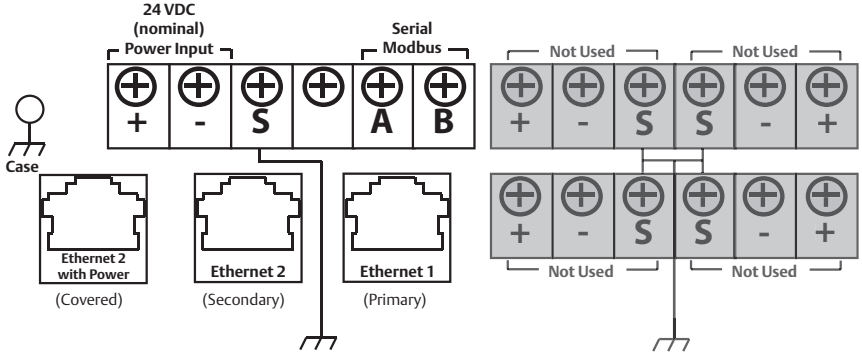
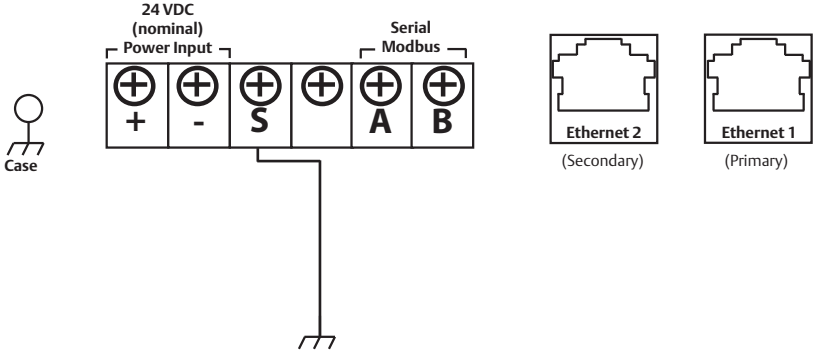



**Figure 10. PoE Terminal Block Diagram**




**⚠ CAUTION**

Do not connect the Host System to the Ethernet 2 with power (covered) port on the Smart Wireless Gateway to avoid damaging the system.

## Best practice

In accordance with Emerson *Wireless*HART® security guidelines, the Gateway should be connected to the Host System via a LAN (Local Area Network) and not a WAN (Wide Area Network).

Twisted shielded pair cable is generally used to wire the serial connection, and it is standard practice to ground the shield on the serial host side leaving the shield floating on the Gateway side. Insulate the shield to avoid grounding issues.

### Power

Power the Gateway as directed in Step 1.

## Step 4: Software installation (optional)

The 2-disk software pack contains the Security Setup Utility (only required for secure host connections or OPC communications) and AMS Wireless Configurator. The Security Setup Utility is located on Disk 1. To install the software:

1. Exit/close all Windows programs, including any running in the background, such as virus scan software.
2. Insert Disk 1 into the CD/DVD drive of the PC.
3. Follow the prompts.

AMS Wireless Configurator is located on Disk 2. To install the software:

1. Exit/close all Windows programs, including any running in the background, such as virus scan software.
2. Insert Disk 2 into the CD/DVD drive of the PC.
3. Select **Install** from the menu when the AMS Wireless Configurator setup begins.
4. Follow the prompts.
5. Allow AMS Wireless Configurator to reboot PC.
6. Do not remove the disk from the CD/DVD drive.

**Note**
Installation will resume automatically after login.

7. Follow the prompts.

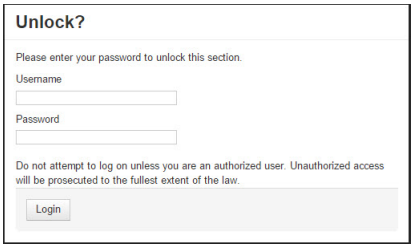
**Note**
If the autorun function is disabled on the PC, or installation does not begin automatically, double click **D:\SETUP.EXE** (where D is the CD/DVD drive on the PC) and select **OK**.

For more information about the Security Setup Utility and AMS Wireless Configurator, see the Smart Wireless Gateway Reference Manual (document number 00809-0200-4420).

# Step 5: Verify operations

Operation is verified through the web interface by opening a web browser from any PC on the host system network and entering the Gateway IP address or DHCP host name in the address bar. If the Gateway has been connected and configured properly, the security alert will be displayed followed by the log in screen.

**Figure 11. Gateway Log In Screen**


Unlock?
Please enter your password to unlock this section.
Username
Password
Do not attempt to log on unless you are an authorized user. Unauthorized access will be prosecuted to the fullest extent of the law.
Login

The Gateway is now ready to be integrated into the host system. If wireless field devices were ordered with the Gateway, they were preconfigured with the same network ID and join key information. Once the field devices are powered, they will appear on the wireless network and communications can be verified under the *Explore* tab using the web interface. The time needed for the network to form depends on the number of devices.

# Product specifications

## Input power

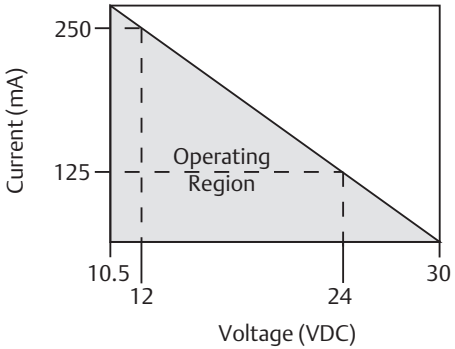
10.5 – 30 VDC (must be a Class 2 power supply)

## Current draw

Operating current draw is based on 3.6 W average power consumption.

Momentary startup current draw up to twice operating current draw.

Maximum permissible current: 1A




## PoE(1)

### Input voltage

Normal Operation (no PSE or IEEE 802.3af): 10.5 – 30 VDC

PoE + PSE Operation (IEEE 802.3at): 17.5 – 30 VDC

### PSE mode

50 V – 57 VDC Output (per IEEE 802.3at-2009)

25.5 W Maximum

## Radio frequency power output from antenna

Maximum of 10 mW(10 dBm) EIRP

Maximum of 40 mW(16 dBm) EIRP forWN2 High Gain option

1. *The current consumption is for Gateway operation only. If using PSE, calculations will need to be made to include the device being powered.*

# Environmental

## Operating temperature range

-40 to 140 °F (-40 to 70 °C)

## Operating humidity range

10 – 90% relative humidity

# Physical specifications

## Weight

10 lb (4.54 kg)

## Material of construction

### Housing

Low-copper aluminum, NEMA® 4X

### Paint

Polyurethane

### Cover gasket

Silicone Rubber

### Antenna

Integrated Antenna: PBT/PC

Remote Antenna: Fiber Glass

# Communication specifications

## Isolated RS485

2-wire communication link for Modbus RTU multidrop connections

Baud Rate: 57600, 38400, 19200, or 9600

Protocol: Modbus RTU

Wiring: Single twisted shielded pair, 18 AWG

Wiring distance: up to 4,000-ft. (1,524 m)

### Ethernet

10/1000base- TXEthernet communication port

Protocols: EtherNet/IP™ Modbus TCP, OPC, HART-IP™, HTTPS (for Web Interface)

Wiring: Cat5Eshielded cable

Wiring distance: 328-ft. (100 m)

### Modbus

Supports Modbus RTU and Modbus TCP with 32-bit floating point values, integers, and scaled integers.

Modbus Registers are user-specified.

### OPC

OPC server supports OPC DA v2, v3

### Ethernet/IP

Supports Ethernet/IP protocol with 32-bit floating point values and integers.

Ethernet/IP assembly input-output instances are user configurable.

Ethernet/IP specifications are managed and distributed by ODVA.

## Self-organizing network specifications

### Protocol

IEC 62591 (*Wireless*HART), 2.4 – 2.5 GHz DSSS

### Maximum network size

100 wireless devices @ 8 sec or higher

50 wireless devices @ 4 sec

25 wireless devices @ 2 sec

12 wireless devices @ 1 sec

### Supported device update rates

1, 2, 4, 8, 16, 32 seconds or 1 – 60 minutes

### Network size/latency

100 Devices: less than 10 sec

50 Devices: less than 5 sec

### Data reliability

> 99%

# Product Certifications

Rev 1.2

## European Directive Information

A copy of the EC Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EC Declaration of Conformity can be found at www.rosemount.com.

## Telecommunication Compliance

All wireless devices require certification to ensure they adhere to regulations regarding the use of the RF spectrum. Nearly every country requires this type of product certification. Emerson is working with governmental agencies around the world to supply fully compliant products and remove the risk of violating country directives or laws governing wireless device usage.

## FCC and IC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: This device may not cause harmful interference. This device must accept any interference received, including interference that may cause undesired operation. This device must be installed to ensure a minimum antenna separation distance of 20 cm from all persons.

## Ordinary Location Certification

As standard, the transmitter has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by a nationally recognized test laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

## Installing Equipment in North America

The US National Electrical Code (NEC) and the Canadian Electrical Code (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

### USA

**N5** U.S.A. Division 2
Certificate: CSA 70010780
Standards: FM Class 3600 – 2011, FM Class 3611 – 2004, FM Class 3616 – 2011, UL 50 - 11$^{th}$ Ed, ANSI/ISA 61010-1 - 2012
Markings: NI CL 1, DIV 2, GP A, B, C, D T4; Suitable for use in CL II, III, DIV 2, GP F, G T4; T4(-40 °C ≤ $T_a$ ≤ +60 °C);
Nonincendive outputs to remote antenna
when connected per Rosemount drawing 01420-1011; Type 4X

***Special Condition for Safe Use:***

1. Explosion Hazard. Do not disconnect equipment when a flammable or combustible atmosphere is present.

## Canada

**N6** Canada Division 2
Certificate: CSA 70010780
Standards: CAN/CSA C22.2 No. 0-M91 (R2001), CAN/CSA Std C22.2 No. 94-M91 (R2001), CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 213-M1987, CSA C22.2 No. 61010-1 - 2012
Markings: Suitable for Class 1, Division 2, Groups A, B, C, and D, T4; when connected per Rosemount drawing 01420-1011; Type 4X

***Special Condition for Safe Use:***

1. Explosion Hazard. Do not disconnect equipment when a flammable or combustible atmosphere is present.

## Europe

**N1** ATEX Type n
Certificate: Baseefa07ATEX0056X
Standards: EN 60079-0: 2012, EN 60079-15: 2010
Markings: Ⓔx II 3 G Ex nA IIC T4 Gc, T4(-40 °C ≤ $T_a$ ≤ +65 °C), $V_{MAX}$ = 28Vdc

***Special Conditions for Safe Use (X):***

1. The equipment is not capable of withstanding the 500 V insulation test required by clause 6.5.1 of EN 60079-15:2010. This must be taken into account when installing the equipment.
2. The surface resistivity of the antenna is greater than 1GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.

**ND** ATEX Dust
Certificate: Baseefa07ATEX0057X
Standards: EN 60079-0: 2012, EN 60079-31: 2009
Markings: Ⓔx II 3 D Ex tc IIIC T135 °C Dc, (-40 °C ≤ $T_a$ ≤ +65 °C)

***Special Condition for Safe Use (X):***

1. The surface resistivity of the antenna is greater than 1GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.

## International

**N7** IECEx Type n
Certificate: IECEx BAS 07.0012X
Standards: IEC 60079-0: 2011, IEC 60079-15: 2010
Markings: Ex nA IIC T4 Gc, T4(-40 °C ≤ $T_a$ ≤ +65 °C), $V_{MAX}$ = 28Vdc

***Special Conditions for Safe Use (X):***

1. The apparatus is not capable of withstanding the 500 V electrical strength test as defined in Clause 6.5.1 of IEC 60079-15:2012. This must be taken into account during installation.
2. The surface resistivity of the antenna is greater than 1GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.

**NF** IECEx Dust
Certificate: IECEx BAS 07.0013X
Standards: IEC 60079-0: 2011, IEC 60079-31: 2008
Markings: Ex tc IIIC T135 °C Dc, (-40 °C ≤ $T_a$ ≤ +65 °C)

***Special Condition for Safe Use (X):***

1. The surface resistivity of the antenna is greater than 1GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.

## Brazil

**N2** INMETRO Type n
Certificate: UL-BR 15.0350X
Standards: ABNT NBR IEC 60079-0:2008 + Errata 1:2011, IEC 60079-15:2012;
Markings: Ex nA IIC T4 Gc, T4(-40 °C ≤ $T_a$ ≤ +65 °C)

***Special Condition for Safe Use (X):***

1. See certificate for special conditions.

## China

**N3** China Type n
Certificate: CNEx13.1929X
Standards: GB3836.1 – 2010, GB3836.8 - 2003
Markings: Ex nA nL IIC T4 Gc

***Special Condition for Safe Use (X):***

1. See certificate for special conditions.

## Japan

**N4** TIIS Type n
Certificate: T64855
Markings: Ex nA nL IIC T4

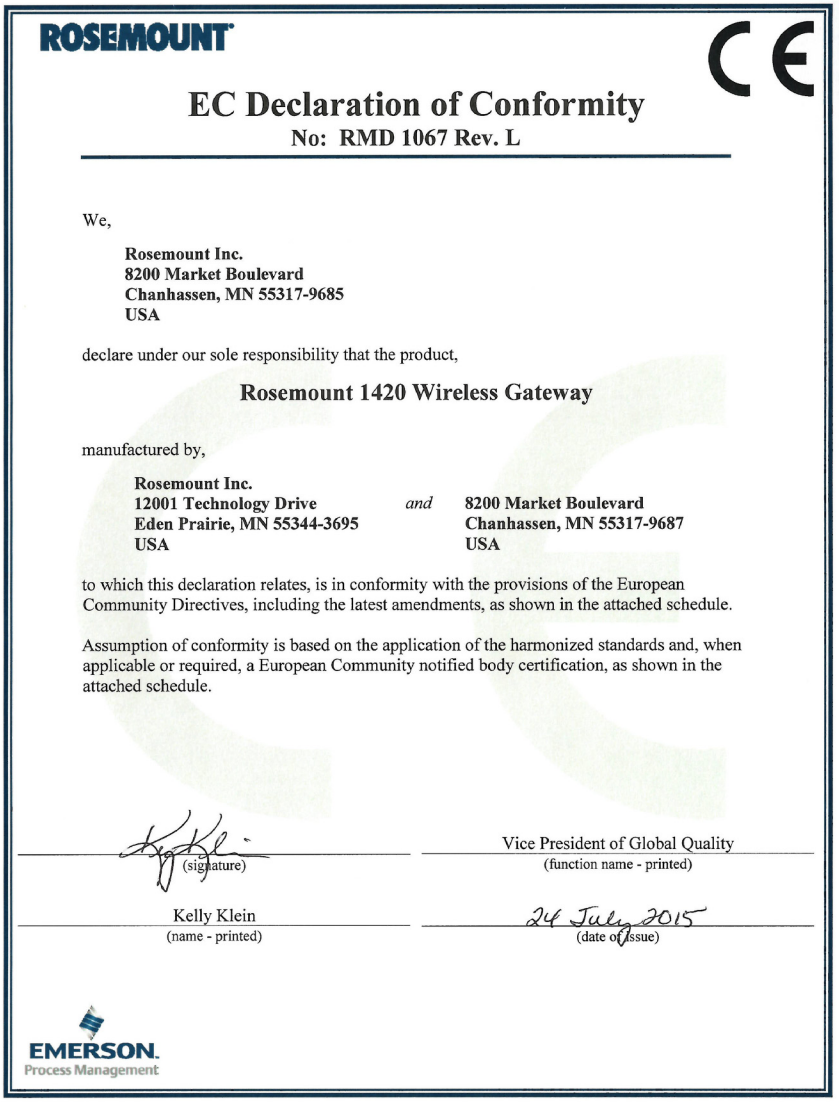
## EAC – Belarus, Kazakhstan, Russia

**NM** Technical Regulation Customs Union (EAC) Type n
Certificate: RU C-US.ГБ05.B.00578
Markings: 2Ex nA IIC T4 X;
T4(-40 °C ≤ $T_a$ ≤ +65 °C)
IP66;

## Combinations

**KD** Combination of N1, N5, and N6

## Figure 12. Smart Wireless Gateway 1420 Declaration of Conformity



ROSEMOUNT

CE

# EC Declaration of Conformity

**No: RMD 1067 Rev. L**

We,

**Rosemount Inc.**
**8200 Market Boulevard**
**Chanhassen, MN 55317-9685**
**USA**

declare under our sole responsibility that the product,

**Rosemount 1420 Wireless Gateway**

manufactured by,

**Rosemount Inc.**
**12001 Technology Drive**
**Eden Prairie, MN 55344-3695**
**USA**

*and*

**8200 Market Boulevard**
**Chanhassen, MN 55317-9687**
**USA**

to which this declaration relates, is in conformity with the provisions of the European Community Directives, including the latest amendments, as shown in the attached schedule.

Assumption of conformity is based on the application of the harmonized standards and, when applicable or required, a European Community notified body certification, as shown in the attached schedule.

(signature)

Vice President of Global Quality
(function name - printed)

Kelly Klein
(name - printed)

24 July 2015
(date of issue)

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# Schedule

**EC Declaration of Conformity RMD 1067 Rev. L**

CE

## EMC Directive (2004/108/EC)

EN 61326-1: 2013

## R&TTE Directive (1999/5/EC)

**All Models with "Operating Frequency and Protocol Code A3"**

EN 301 489-17: V2.2.1
IEC 61010-1: 2010 Third Edition
EN 300 328: V 1.9.1
EN 62479

## ATEX Directive (94/9/EC)

**Model 1420 Smart Wireless Gateway**

**Baseefa 07ATEX0056X – Protection Type n Certificate**

Equipment Group II, Category 3 G
Ex nA IIC T4 Gc (-40°C ≤ Ta ≤ +65°C),
Harmonized Standards Used:
EN 60079-0:2012
EN 60079-15: 2010

**Baseefa 07ATEX0057 – Dust Certificate**

Equipment Group II, Category 3 D
Ex tc IIIC T135°C Dc (-40°C ≤ Ta ≤ +65°C),
Harmonized Standards Used:
EN 60079-0: 2012
EN 60079-31: 2009

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# Schedule

## EC Declaration of Conformity RMD 1067 Rev. L

### ATEX Type Examination Certificate

**Baseefa** [Notified Body Number: 1180]
Rockhead Business Park,
Staden Lane
Buxton, Derbyshire
SK179RZ United Kingdom

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*00825-0200-4420*

**Quick Start Guide**
00825-0200-4420, Rev FE
August 2015

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